2008-02

Cold Front Rising As Global Warming Melts Polar Ice Pack, a New Race for the Arctic's Resources Begins; Strategic Insights: v.2, issue 8 (February 2008)

Cold Front Rising: As Global Warming Melts Polar Ice Pack, a New Race for the Arctic's Resources Begins

Recently Re-Asserted Russian Claims to Polar Seabed Fuel a New Northern Show-Down Reminiscent of the Cold War Conflict

September 2007

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Two decades ago, Arctic scholar Oran Young penned a prescient article for the Winter 1985-86 edition of *Foreign Policy* called "The Age of the Arctic," in which he proclaimed: "Today, the Arctic is rapidly becoming a focus for defense and development issues that touch on the core interests of each of the superpowers." Young then believed that "the world [was] entering the age of the Arctic, an era in which those concerned with international peace and security will urgently need to know mach more about the region and in which policy makers in the arctic rim states will become increasingly concerned."[1] Indeed, a quick glance at any Cold War-era map of the polar region would show the two superpowers standing face-to-face across their common polar frontier. The logic of geopolitics placed the North Pole at the very center of the world, making the Arctic Ocean appear to be the modern-day equivalent of the Mediterranean of ancient times.

And yet, the age of the Arctic did not come. There was one seemingly immutable climatic factor preventing the "age of the Arctic" from starting: the harsh climate and permanent polar ice pack made large-scale polar development largely an exercise in futility. Apart from nuclear submarines passing silently beneath, and exceedingly expensive heavy icebreakers crunching their way across, the polar sea ice remained largely impenetrable. Its cold and forbidding climate meant that apart from a handful of hardy adventurers and a number of small, isolated indigenous communities, the population and economic output of the vast polar region remained minimal. In addition to the region's impenetrable geopolitics was the swift and unexpected end of the Cold War—taking with it its polar-centric perspective, and delaying the onset of the seemingly imminent age of the Arctic predicted by Young.

Global Warming Ushers Forth the Age of the Arctic

But now, two decades after Young's prescient article introduced the concept of the "age of the Arctic" to the lexicon of IR and strategic theorists, something transformative is happening up along our last frontier: the long frozen, impenetrable polar sea is starting to thaw, quite rapidly, opening up larger portions of the Arctic Ocean to seasonally ice-free conditions for longer periods of time. So quickly is the ice melting that the prospect of a navigable, ice-free Arctic Ocean no longer the stuff of fanciful imagination, and has been the topic of two NOAA National Ice Center-sponsored conferences, the April 2001 Naval Operations in an Ice Free Arctic Symposium, and the July 2007 Impact of an Ice-Diminishing Arctic on Naval and Maritime Operations Symposium.[2]

Within our lifetimes, and possibly in less than a single generation, we may witness the opening up of Arctic sea lanes that are fully navigable year-round : the strategic, economic and diplomatic consequences will be enormous. According to scientists from the U.S. National Snow and Ice Data Center (NSIDC), the Arctic Ocean will be ice-free by 2060 if current warming trends continue. NSIDC research so far this year suggests that "the Arctic is experiencing an unprecedented sixth consecutive year with much less sea ice than normal, and it looks like this year's sea ice melt season may herald a new and steeper rate of decline," and that "the extent of Arctic sea ice for 2007 is currently on pace to set a new record minimum that may be substantially below the 2005 record."[3]

Global Impacts of Global Warming

The impacts of global warming and the resulting Arctic thaw will be profound. Michael T. Klare, a professor of peace and world security studies at Hampshire College and defense correspondent for *The Nation,* explained that "global warming will affect resource competition and conflict profoundly" in the coming years—and while "global warming's effects cannot be predicted with certainty, it is likely to produce diminished rainfall in many parts of the world, leading to a rise in desertification in these areas and a decline in their ability to sustain agriculture" which "could force people to fight over remaining sources of water and arable land, or to migrate in large numbers to other areas, where their presence may be resented by the existing inhabitants."[4] Klare added that "global warming is also expected to produce a significant rise global sea levels, and this will result in the inundation of low-lying coastal areas around the world"—resulting in "the widespread loss of agricultural lands, forcing many millions of people to migrate to higher areas, possible encountering resistance in the process." Klare cautioned that "because many poor countries will be unable to cope with the catastrophic effects of global warming, state collapse is a likely result along with an accompanying epidemic of warlordism, ethnic violence, and civil disorder."

Discovering a Brand New World

But in the Arctic region itself, the melting ice will open up an entire ocean that has been iced-over for millennia, bringing an end to what we can think of as the final chapter of the last Ice Age.[5] As the polar ice melts, we'll witness the gradual emergence a brand new world, unlocking what just a few years ago would have been unimaginable economic opportunities, as the long-closed Arctic waters open up to rising volumes of commercial shipping and naval traffic, and as the thinning (and later disappearing) ice makes it more cost-effective, and technologically viable, to explore the region's undersea natural resource potential, and to fully develop those new discoveries. This new world is not unlike that discovered by early explorers when they journeyed across the Atlantic, from the Old World to the New, in search of undiscovered countries and riches.[6] We, too, are on a journey of discovery to a new and unknown world – an undersea world, full of riches unknown but not unimagined.

But it's the imagination of these riches that has led a new diplomatic crisis, which began on August 2, not long after Russia dispatched the flagship of its Antarctic research fleet, the Akademik Fyodorov, and the nuclear-powered icebreaker Rossiya to the North Pole, where Artur Chilingarov, Deputy Speaker in Russia's Lower House and a well-known polar hero from Soviet times, and fellow parliamentarian Vladimir Gruzdev, descended 4,200 metres to the sea floor in a Mir mini-sub, where they left a titanium Russian flag and boldly laid claim to the North Pole on behalf of mother Russia.[7]

Russia Claims the North Pole

While the stated objective of their undersea polar mission was to advance Russia's claim to a vast extension of its continental shelf extending from Russia's northern shores to the North Pole

along the Lomonosov Ridge, the expedition was largely a public relations stunt designed to bring Russia's claim to the attention of the world. A more properly scientific mission exploring the undersea contours of the Lomonosov Ridge and retrieving geological samples to help Russia back its claim with scientific evidence took place in May 2007. Prior to their descent into the chilly depths, Chilingarov announced, "The Arctic is Russian. We must prove the North Pole is an extension of the Russian coastal shelf. Of course, [the expedition] is important in terms of science, but also in terms of geopolitics as well."[8] He added, "We are going to be the first to put a flag there, a Russian flag at the bottom of the Arctic Ocean, at the very point of the North Pole."[9] Chilingarov also asserted. "The Arctic is ours and we should manifest our presence."[10] Upon resurfacing to an international diplomatic uproar, he proclaimed: "I don't give a damn what all these foreign politicians there are saying about this. If someone doesn't like this, let them go down themselves," and to "then try to put something there."[11] He further stated that "Russia must win. Russia has what it takes to win. The Arctic has always been Russian."[12]

Russia 's brash claim was quickly rejected by Canada, whose High Arctic archipelago abuts the North Pole where its own territorial ambitions come face to face with Russia's recent polar assertiveness. As then Canadian Foreign Minister Peter MacKay, who in recent days was reassigned to run the Defense Ministry, told the press, "You can't going around the world these days dropping a flag somewhere," adding, "This isn't the 14th or 15th century."[13] MacKay reassured Canadians that "there is no threat to Canadian sovereignty in the Arctic" and added that "we're not at all concerned about this mission—basically it's just a show by Russia."[14]

Canada Responds by Defending its Arctic Sovereignty

Yet at the same time, Canadian Prime Minister Stephen Harper hastily embarked upon a three-day Arctic visit during which he announced Canada's decision to develop a $100 million deepwater port facility at Nanisivik, near the eastern entrance of the Northwest Passage, boosting Canada's ability to project naval power into not just the waters of the fabled passage, but into the High Arctic as well.[15] Harper also announced the formation of an Arctic training facility for its armed forces at Resolute. He had announced a month before his government's intentions to spend over $7 billion to build and maintain six to eight Polar Class 5 Arctic Offshore Patrol Ships. As Harper explained: "Canada has a choice when it comes to defending our sovereignty over the Arctic. We either use it or lose it. And make no mistake, this government intends to use it."[16] The Russians evidently share this use it or lose it philosophy; in addition to its recent expeditions in Arctic waters, its air force has just commenced five-days of strategic bomber exercises over the North Pole, where it will practice firing cruise missiles, navigating the polar region, and aerial refueling.

While Ottawa and Moscow are engaged in a muscular display of diplomacy reminiscent of the Cold War, hope is not lost for a more multilateral approach. According to the Law of the Sea Convention, in addition to a 200-mile exclusive economic zone (EEZ), signatories may also claim as additional territory any extensions to their continental shelves that they can scientifically substantiate. Russia, Denmark and Canada all hope the Lomonosov structure extends outward from their continental shelf; all treaty signatories have ten years from their signing to make their claim. Russia first claimed the ridge in 2001 but the International Seabed Authority requested scientific proof. Denmark is currently conducting research to make its case, as is Canada. Because Canada did not sign the Law of the Sea Convention until 2003, it has until 2013 to make its case, while Russia signed in 1997, so must submit its evidence this year. Denmark signed in 2001 so has until 2011. The United States, owing to its recent taste for unilateralism, has yet to sign the treaty—so for the moment is on the sidelines in the race for Arctic claims, though its newest icebreaker, the USCGC Healy, is currently steaming North into the Beaufort Sea to map the U.S. continental shelf as part of its Arctic West Summer (AWS) 2007 expedition.

A Chilling Reminder of Russia's Imperial Past

To gain some insight to recent events in the Arctic, we spoke Dr. Ariel Cohen, a Senior Research Fellow at the Washington, D.C.-based Heritage Foundation.[17] He explained that “geologists believe that a quarter of the world's oil and gas, billions of barrels and trillions of cubic feet, may be located on the Arctic continental shelf and possibly under the polar cap. The Arctic frontier also harbors precious ferrous and non-ferrous metals, as well as diamonds. At today's prices, these riches may be worth gazillions of dollars.” And by gazillions, Cohen explained that he meant hundreds of billions or even trillions of dollars. Cohen added that “as the ice caps melt and shrink, not only will these resources will be more accessible than they are today, but a new sea route along the northern coast of Eurasia may be open to reach them.” Noting that “Canada just recently established a deep water port at Nanisivik,” he observed that “Russia's attempted grab is a cause for concern. And it’s being countered by the Danish and the Norwegian claims as well.” Cohen said that “what we may end up seeing instead of a 200 mile economic zone along the coast is a change to claim sectors of the Arctic,” much like the way Antarctica is managed, “and I think that would be unfortunate. Unless it is negotiated in a peaceful manner, it will cause a tremendous amount of tension and friction.”

With regard to Russia’s flag-dropping beneath the North Pole, Cohen explained that the “Russian move is deeply rooted in Russian history” and is “reminiscent of both the Russian imperial expansion of the 18th and 19th centuries when most of the Russian Arctic was claimed,” while also being a “chilling throwback to the attempts during the 1930s to conquer the Arctic during the years when the Soviet Union was seized by fear and hatred.” Cohen recalled how “Stalin and his henchmen executed ‘enemies of the people’ by the hundreds of thousands” while “those not yet arrested were forced to applaud the ‘heroes of the Arctic’—pilots, sailors, and explorers—in a macabre celebration of Stalinist tyranny.” He observed that Russia’s latest polar expedition “is a chilling reminder of the brutal era when millions of Gulag prisoners were sent to the frozen expanses to build senseless mega-projects for the power-mad dictator,” adding that “today's Russian rhetoric is reminiscent of the triumphant totalitarianism of the 1930s and the mindset of the Cold War.” Cohen noted Russian President Vladimir Putin, a former KGB officer and FSB chief, “weighed in during a speech on a Russian nuclear-powered icebreaker earlier this year, urging greater efforts to secure Russia's ‘strategic, economic, scientific and defense interests’ in the Arctic.”

In response to Russia’s aggressive assertion of its claims to the Arctic, Cohen believes that “legal and diplomatic actions are necessary,” and pointed out that the U.S. State Department has “already expressed its skepticism of planting of the Russian Flag,” and believes the act was “not in legal effect.” Cohen added that “Canada joined in this opposition,” noting its Prime Minister, Stephen Harper, quickly embarked upon a “three-day Arctic trip” during which he made major announcements that “increased Canada’s naval presence in the Arctic.” In order to “block Russia's grab,” Cohen believes that the United States “should encourage its friends and allies—especially Canada, Denmark, and Norway—to pursue their own claims with the United Nations Commission on the Limits of the Continental Shelf.” And while America “has not ratified LOST,” the Law of the Sea Treaty, Cohen noted the other Arctic states “have filed claims with the Commission in opposition to Russia's claims,” and believes “the U.S. should also encourage Canada to coordinate a possible claim through the International Justice Court in The Hague against the Russian grab, which the U.S. may join.” Cohen believes Moscow’s “decision to take an aggressive stand has left the U.S., Canada, and the Nordic countries little choice but to forge a cooperative high-north strategy and invite other friendly countries, such as Great Britain, to help build a Western presence in the Arctic: This will probably have to include a fleet of modern icebreakers, submersibles, geophysics/seismic vessels, and polar aircraft.” As Cohen explained, there’s “too much at stake to leave the Arctic to the Russian bear.” But in an optimistic “parting thought,” Cohen added, “I don’t think Russia has financial resources and technology to explore the Arctic for its riches alone,” and that it “would be much better if U.S., Canada, and—as well as Denmark and Norway will have a multilateral regime negotiated that will specify the economic zones, and will open each other’s resources for joint ventures that will boost economic development in the Arctic.”

Russia Warms Up to a Thawing Arctic

To understand Russia's intentions, we interviewed Dr. Vladimir Frolov, the director of the National Laboratory for Foreign Policy, a Moscow-based think tank.[18] Frolov, a former Foreign Service officer, writes about Russia's foreign policy for *Russia Profile* magazine and penned a prescient column in the July 17th edition titled "The Coming Conflict in the Arctic: Russia and U.S. to Square Off Over Arctic Energy Reserves."[19] Frolov explained that "there are two principal lines of thinking on global warming in Russia. One is that global warming is a myth, the other is that global warming exists and it is good for Russia." He added that "Russia might benefit from global warming if it leads to more mild temperatures in the Arctic, provided the problem of flooding could be solved," because a milder climate "would make it less prohibitively costly to develop the considerable energy resources that Russia has there." He noted that "Russia views the Arctic reserves as its 'last barrel of oil' to be safeguarded and then used to Russia's strategic advantage," much like the U.S. view of "oil exploration in the Arctic National Wildlife Refuge (ANWR)."

So bountiful are Russia's reserves of Arctic petroleum resources that Frolov thinks that they will precipitate an inevitable clash between Russia and the United States reminiscent of its Cold War clash across the Arctic. As Frolov explained in his July 17, 2007 column in *Russia Profile*, "the stage has been quietly set for a much more serious confrontation in the non-too-distant future between Russia and the United States—along with Canada, Norway and Denmark," as Russia "recently laid claim to a vast 1,191,000 square km chunk of the ice-covered Arctic seabed." Its claim is "not really about territory, but rather about the huge hydrocarbon reserves that are hidden on the seabed under the Arctic ice cap: these newly discovered energy reserves will play a crucial role in the global energy balance as the existing reserves of oil and gas are depleted over the next 20 years."

While Canada is concerned with protecting its sovereignty over the Northwest Passage, Russia has its own "Northeast Passage" that "is open for a few summer months but is not used for transit to the Pacific, rather to supply northern outposts in West and East Siberia, particularly Norilsk." Frolov noted that "the interest is there to make it a viable transit route," but first "Russia needs to build an entire new fleet of modern nuclear powered icebreakers to accomplish that. Some build up in the icebreaker fleet is planned, but not enough to solve the problem."

Having once owned Alaska before selling it to the United States in 1867, Frolov noted that "the lesson from the Treaty of Cession is simple: never sell your sovereign territory, one bad real estate decision, a lifetime of regrets." This time around, Russia is making sure that it protects its Arctic sovereignty, much like Canada, putting into practice a similar use-it-or-lose-it strategy. Frolov believes that conflict over the Arctic's natural resources is more likely than collaboration, and noted Russia faces a potential conflict with Norway over the "sizeable gas fields" in the Barents Sea in its western Arctic, and with the U.S. over the extended EEZ in its eastern Arctic. Though Frolov does not predict an Arctic arms race, he does believe that "increases in naval presence are likely. One thing that might be interesting to watch: increased scope and intensity of anti-submarine operations by the U.S. navy against Russian SSBNs hiding under the polar icecap." However, even with the melting of the polar sea ice, Frolov finds it "hard to foresee large-scale surface naval operations in the Arctic."

Dramatic Changes Here to Stay

With its sovereign territory abutting the polar region claimed by Russia, Canada has decided not to wait to see what sort of naval presence Russia projects into the opening Arctic theatre. Its Prime Minister has decided to make a stand, announcing three rapid fire decisions to augment its Arctic military presence, and to bolster its ability to defend its Arctic sovereignty.

Dr. Rob Huebert, a professor of Political Science at the University of Calgary and the associate director of its Centre for Military and Strategic Studies, observed that "everything has changed quite dramatically" in the Arctic, so much so that his phone has been ringing off the hook, mostly recently from Moscow when *Pravda* called to interview him on Canada's perspective to the unfolding Arctic sovereignty crisis.[20] With so much recent diplomatic and military activity taking place in the North in recent days, he's found his own research efforts, including a book in progress and an edited collection, "keep being pushed back." But he made time for this article, speaking with us at length after Ottawa's latest announcement that its new deepwater Arctic naval port will be based at Nanisivik, and a new Arctic training facility for its armed forces will be based nearby at Resolute. Huebert explained that many Canadians responded with shock to Russia's recent Arctic behavior, noting that the "Canadian response was, 'Oh my God! We have to do something.'"

Huebert observed that past crises concerning Arctic sovereignty tended to be resolved fairly quickly, including those sparked by the 1969 transit of the oil tanker, the SS Manhattan, through the Northwest Passage; and the 1985 transit of the U.S. Coast Guard icebreaker, Polar Sea.[21] But this current Arctic sovereignty crisis is less likely to be quickly resolved, owing to three issues that reflect the Arctic's transformation since then: climate change, which has increased accessibility to the Arctic; high energy and commodity prices, which encourage further claims to Arctic resources; and international environmental awareness, and the emergence of new structures to resolve disputes in the Arctic, as reflected by the UN Convention on the Law of the Sea (CLOS), which provides various mechanisms for dealing with competing claims. As Huebert explained, "All three of these issues are coming together, and that means the time of the Arctic is now." He added that we're in "just the beginning," and "all these factors, and the manner they're all intersecting, basically mean this is the initial phase of a new Arctic international regime." And since we're at the very beginning of what will be a protracted dispute over the Arctic's resource, "we are going to see hardened positions," as there are "huge economic interests, huge strategic interests," and with climate change making its effects felt across the Arctic, "the old way the harsh climate minimized the nature of the interactions won't be there anymore." At the same time, Huebert does see economic opportunity that could benefit all of the Arctic rim states, "if done in an intelligent manner."

On climate change, Huebert noted that "what's always stopped anything from developing long-term in terms of security threats, responses, southern interaction, has been the extreme climate in the Arctic. Inuit know how to handle it, but we don't." And, he added, the price of Arctic development has been "so formidable in the past." He explained that now, the "reality and perception of climate change make resources accessible now," even though not too long ago, these resources were perceived to be inaccessible. Indeed, as far away as Korea, Samsung is building a new class of ice-capable oil tankers that will weigh in at 120,000 tons with specialized isopod propulsion systems. Initially for use on the Russian side of the Arctic, Huebert said there's "no reason why they can't be used in the North American side." He emphasized "that Samsung is building them, not conceptualizing them, not thinking about building them," but in fact building them "so they'll be ready by 2009," and this illustrates the rapid transformation of the Arctic from isolation to integration. After all, he noted, the Koreans "are not going to do anything without a solid business plan." Huebert reiterated, "We're not talking about people thinking about doing it: but doing it." Another anecdote illustrating the new reality of Arctic development that Huebert mentioned was the decision by Exxon and Imperial Oil "to put down a quarter of a billion dollars," or $585M in Canadian dollars, for a new oil lease in the Beaufort Sea. "It shows that they're serious."

As for high energy and commodity prices, Huebert explained that "with the demands that India and China are now putting on energy markets," we won't be seeing a "return of cheap oil," and this will help ensure that Russia "will resume a position as a power." Add to this the changes seen in international law, including the signing of CLOS by four of the five Arctic rim states so far, and Huebert concludes: "Ergo, none of this is going away." Ever since the CLOS "came into force in

1994," Huebert explained, beyond the 200 mile EEZ, "if you have a continental shelf you can claim sovereign rights over the soil and subsoil," including its oil, gas, and fisheries resources. But "the challenge is, it isn't like the EEZ where everyone gets 200 miles; first you have to prove you have a continental shelf" and that means you "have to do the science," and once the International Seabed Authority has evaluated your claim, "then you have to get into negotiations with you neighbor" and deal with any disagreements associated with your claim "in a peaceful manner of good will." So now, "everyone is madly trying to do their science" since "you have ten years to determine the science once you ratify." A big challenge is that "no one has ever resolved over a continental shelf that they share," and so far, "reports on the seabed" under the Arctic Ocean suggest that it "looks as if the entire polar sea, the Arctic ocean, is one big continental shelf. And this is just the beginning of the process of trying to figure it out how to divide it up."

Within this context, Huebert explained, Russia's assertive claim to the North Pole may be viewed in part to be international theatrics, as Russia is "trying to mark their claim in the snow and ice." And, he noted, "everyone, us included, is fixated on giving the North Pole some sort of legal status," even though "nothing in international law says you have to take a sector theory approach," just as in Antarctica, there was really "no reason you have to stop at the South Pole," and that it was just an "invention." Something similar is happening in the Arctic, and Huebert believes this is driving Russia's claim: "What is happening," Huebert explained, is that "Russia is saying we have to go the North Pole," and in so doing they are "mentally reinforcing in this that that pole has a special status." So, Russia's actions may be viewed as "theatrics, yes—but it's also a very intelligent move," as "Russia is clearly saying this is the starting point and everyone will divide the boundary from that starting point." With Russia, the U.S., Denmark, Norway and Canada all making claims to the Arctic as continental shelf, Russia's effort to identify the North Pole as the recognized international boundary, could prevent an encroachment upon what Russia perceives to be its territorial waters on its side of the pole. It thus reflects a defensive, and not offensive, impulse, in contrast to Cohen's analysis of Russia's actions being rooted in a neo-Stalinist and neo-imperial impulse to expand its power and control.

Ottawa Makes Its Stand

Huebert commented on Prime Minister Harper's announcement, made right after Russia's planted its flag 4,200 metres beneath the North Pole, that the location for its naval deepwater port facility in the Arctic will be at Nanisivik, noting this is "right on the Northwest Passage" and "gives him good mobility to get the Western and Eastern Arctic"—so in geopolitical terms it's in "the best position it could be." Nanisivik made economic sense, too, given that Iqaluit, which was under consideration, experiences the second highest tides in the world, and "they don't even have a proper jetty" and "would need a sophisticated system" including proper berthing. So while there was "a lot of hope in Iqaluit," the "economics and challenges of putting in proper berthing" meant the "price tag got too big." By going "into Nanisivik,' Huebert noted "the berthing facility is there, the infrastructure is there, and it's in the ideal geopolitical location."

Ottawa has been busy, articulating a slew of new policies to enhance its sovereignty over the Arctic, including its July decision to build a new fleet of six to eight Arctic coastal patrol vessels, and to build an Arctic training center for its armed forces in the Nunavut community of Resolute, in addition to the deepwater port facility at Nanisivik. "They have made substantial promises, and substantial inroads," noted Huebert, who sympathetically pointed out that "you have to start somewhere." And while "we still have the icebreakers," including several heavy icebreakers, "yes, they're getting long in the tooth; yes they have to be replaced, but we don't have the costal patrol vessels," so it is "a logical argument to go the way they are." But Huebert added that "the big million dollar if" is: "Are you actually serious about recapitalizing the coast guard icebreakers?" He noted "the Coast Guard is in the process of preparing for recapitalization" and added that "if you talk to Coast Guard officials," you'll find that they are "starting to look more seriously at their icebreaking fleet. As long as they do that, and it's not a lot of talk," then "having coastal patrol vessels with an icebreaking fleet is the most useful" of solutions, providing the Canadian Coast

Guard with “a layered approach” to Arctic security and defense. But “if mere talk, and just a away to get away from rebuilding the icebreakers,” Huebert cautioned that the decision to build coastal patrol vessels is going to bring trouble, especially in the Western Arctic, where “you’re going to see more ice, more difficult ice conditions, as the polar ice cap breaks up.” And it’s in the Western Arctic where most of the oil and gas development is going to take place, and where there is already a maritime border dispute with the United States that’s just waiting to blow up, Huebert said.

Huebert explained that he’d “like to be positive that it won’t go that bad,” but noted “all you need is a couple of bad turns and things can go bad really quickly” in the Arctic, as experienced during the Cold War. But he noted, “We still have time for a collaborative approach to all things Arctic, we can turn around and agree that all the disputed borders won’t escalate, and that any of the resource issues will be dealt with by joint management regimes. Hell, if the Indonesians and the Australians can do it, I don’t see why we can’t.”

But Huebert cautioned that “Arctic issues have a habit of catching people unexpectedly, though they shouldn’t.” He recalled how the Polar Sea incident “escalated really quickly and could have been handled quite differently, but it colored relations between Canada and the U.S. for a long time.” And he added that “little issues like Hans Island can hurt relations between Canada and Denmark.” Even an overly aggressive resource exploration company might come along and start drilling in a disputed zone, and if so, things “will get real ugly real fast,” as “these things have a bad habit of getting nasty real fast without people really anticipating, and at that point, that’s where positions start to harden.” Huebert calls upon the Arctic rim states to come together and address these issues now: “Let’s get the means of resolving” Arctic disputes developed, and a “method for handling it. Let’s create an understanding of the border issues, understand the environmental issues we both know are important, we all know we could do that right now. There’s no reason why we couldn’t start tomorrow.”

All that’s needed, Huebert noted, is the political will. “We’ve done it before,” he recalled, pointing to CLOS which emerged during the peak of the Cold War, “but the international community came together from 1973-82, and basically created so many elements of a peaceful oceans.” As he reflected, “There’s no reason we can’t do it for Arctic issues, we did it before. The potential is there.”

Nanisivik Insights

We spoke with Steve Keenan, who started working at Nanisivik in February of 2000 as the Environmental Technician, quickly became its Environmental Coordinator, and by mid-2001 took on the role of Environmental Superintendent until his departure in April of 2003, soon after the mine was closed.[22] He recalled how when he first started, he was “overwhelmed by the beauty of the place. In my first summer I was amazed at the landscape without the blanket of snow and remarked that I imagined that this is what Mars must look like; only later did I find out that NASA had established the Mars Arctic Research Station on Devon Island not far north of Nanisivik.”

Keenan noted the effects of global warming can already be felt there, especially by long-time northerners. So while it “was still very cold up there from a southerner’s perspective,” Keenan found that “to the long time southern employees, and the Inuit, the change in climate had been apparent for quite some time. The southern employees would frequently remark that while the temperatures would still drop to, or below, minus 45ºC for days or weeks, but they no longer saw temperatures that low for months.” Keenan recalled that “the Inuit told stories often that recently they had been getting out on the ice later each winter and were forced to return home earlier every year,” and that “the hunters were not traveling as far as they once had to in order to reach the floe edge to hunt. I believe this same story is now quite pervasive throughout the entire North.” He pointed out that “the impact of the warmer temperatures was more apparent on land than on the ice. Vegetation is emerging earlier in the year and growing larger; ground that could

normally be walked across without trouble is now nearly impassible due to the increased depth of the active layer of permafrost; and, depressions that once held pools of water for migrating birds are now disappearing as the depth of the active layer continues to increase."

As for Nanisivik's ice conditions, Keenan recalled that "immediately around Nanisivik the ice was typically fast ice (that year's development) with the occasional occurrence of icebergs. Further to the north in the Lancaster Sound, multi-year ice can drift and pack into the shipping lane, although this phenomenon is more pronounced in western areas." He noted that the ice "within the Strathcona Sound would typically be 1.2 to 1.5 metres (4 to 5 feet) thick while ice could form up to 2 metres (6.5 feet) thick in the Lancaster Sound." He does not believe that "shipping lanes being clogged with ice is as much of a concern in the Eastern Arctic as it is in the West, simply due to the arrangement of the islands which create pinch points." But he did recalls that "several times we had cargo ships get stuck in the ice following a change in wind direction that brought pack into the shipping lane. These cargo ships however were ice rated but not heavy class icebreakers and would have to remain where they were until the Terry Fox or another vessel could free them."

With regard to Canadian Prime Minister Harper's recent announcement of a deepwater port at Nanisivik, Keenan believes it's "ideally located for patrol of the eastern entrance to the Northwest Passage," and explained that "Nanisivik can be reached by the Canadian Coast Guard vessels Terry Fox and Louis St-Laurent or the FedNav vessel MV Arctic as early as May, and can stay until November should the need arise." He recalled how "the typical shipping season for the mine would run from June until September, mostly due to the impact on Inuit hunters; you can imagine the peril a hunter would face in traversing the ice and encountering a large strip of open water caused by the passage of an icebreaker."

The decision to place Canada's new deepwater port at Nanisivik doesn't come as a total surprise to Keenan. He recalled how "for many years the mine had been in discussions with various branches of the Canadian government to find uses for the infrastructure, and on several occasions deals were nearly reached. With the thawing of Cold War tensions the political ambition to invest resources at Nanisivik appeared to wane. DND appeared to always support sovereignty efforts through the Canadian Rangers based out of many communities and other operations to maintain a presence in the Arctic, but it really seems like a recent development of having Ottawa find the will to dedicate the resources for a more significant presence."

Keenan noted "while the mine built and commissioned the port for its own use it," that "through some agreement ownership was transferred to Transport Canada" until 1999, when its public port designation "was revoked for reasons that I'm not privy too." This illustrates how "the port, for quite some time, has been under the authority of the Canadian government and used by Nanisivik Mine." He observed that "the port has remained in continuous operation for the Eastern Arctic sealift and in support of mine reclamation activities since the closure of the mine in 2002," and that "maintenance on the port infrastructure would have been continual." Keenan added that "one of the key components to the port facility is the tank farm" which "has a very large capacity and has been used by the Coast Guard for a number of years to transship fuel to northern communities." He added that its "diesel (or bunker C) capacity is in the range of 10.5 million litres while the jet A-1 and gasoline capacities are around 1 million litres each," and with "this large a capacity it would be fairly easy to support seaborne and aerial surveillance activities from this location." Keenan added that "another advantage of this location is the climate. The cold temperatures for the majority of the year combined with very low relative humidity have kept these tanks in excellent condition since their installation. The storage tanks and associated pipelines were inspected at the start of every shipping season by the fuel supplier before offloading the first vessel and they were always found to be in excellent condition."

Keenan noted that "the reclamation activities at Nanisivik are scheduled to be completed this summer, including the cleanup of the port. The decommissioning of the port facility was never

included in the mine's reclamation plan but I believe a memorandum of understanding was being developed for the future fate of the tank farm. The usefulness of the port would have been greatly diminished without the tank farm and would have required a new tank farm to be constructed or a fuel ship to be harbored in the Strathcona Sound for the majority of the shipping season."

Keenan believes that DND "never utilized the port," and that its 2006 voyage of a Canadian warship to Iqaluit "was the first time in 30 years that DND had operated a vessel north of 60." However, he noted that "DND did make regular use of the airstrip at Nanisivik however with several C-130s landing during the year." In recent years, he added, "a Russian cruise ship would dock at the port to take on fresh water," and "on one occasion passengers disembarked at Nanisivik where they met a chartered aircraft bringing new passengers to board the ship." During the life of the mine, "the port at Nanisivik saw a significant amount of traffic during the summer as the mine shipped out lead and zinc concentrates and brought in supplies of fuel and materials along with those materials associated with the sealift. I was never aware of any vessels harboring at Nanisivik exclusively for scientific studies in the region, but crews often discussed testing being done while sailing to the communities or made mention of other vessels operating in the area conducting research." Keenan noted that "traffic at the port was almost exclusively limited to the Canadian Coast Guard and mine related shipping. It was very rare to have any other use," and that "the only other naval activity reported to me during talks with the Hunter & Trappers Association was that of evidence of submarines which had punched up through the ice. I have no direct evidence of this but have personally seen a large disturbance in the ice in the Strathcona Sound where it appeared that something had punched through."

Keenan explained that "as the Arctic continues to warm, the operational window for seaborne surveillance continues to widen, but surveillance of the passage is not limited to seaborne vessels. There is also a 6,400 foot gravel airstrip to the south of the port and former town site that has remained in operation to service the community of Arctic Bay. This airstrip is capable of handling some significant traffic and is not limited to light aircraft. 727s, 737s, and C-130s have all frequently used the airstrip so it would not be much of a leap to presume that year-round airborne surveillance of the region could be carried out. There currently is no instrumentation landing system at the Nanisivik airport (YSR) which occasionally caused commercial traffic servicing the mine to divert, but such an upgrade could easily be made by DND. Aerial reconnaissance combined with a naval station in close proximity to the eastern entrance to the Northwest Passage would make for a highly effective combination in this region for monitoring and/or intercepting seaborne traffic. The response times would be very short."

With the thawing of the Arctic, Keenan commented that "the increased exploration and maritime activity is a foregone conclusion in my mind," as "the Arctic will see an increased presence from corporations seeking to claim and exploit resources and the government activity will also increase to ensure that these claims are made within their sovereign territory in order to reap the royalty payouts. I think the interesting part of this to watch won't be the science and pseudo-science that's brought out to support national interests but rather the multinational corporations and who they broker deals with and how they position themselves so that they're not left on the outside when the final national boundaries are drawn." As Keenan observed, "I have no doubt as well that many countries are going to aggressively position themselves to take advantage of the vast resources that exist in the Arctic, or simply to ensure that access to the Northwest Passage is guaranteed when ice free."

Keenan added, "I wholly believe that this is Canadian territory and only wish to see that claim acknowledged for the purpose of imposing strict environmental and social constraints on vessels which use the passage." As he explained, "it would be a great economic boon to reduce shipping times via the Northwest Passage and a benefit to many nations but not if it comes at the expense of the indigenous peoples who rely on the ice to reach traditional hunting areas; a single ice breaking vessel could cut off access to hunting areas that will negatively impact many communities that rely upon a successful hunt. Without enforceable environmental standards this

region could be permanently damaged through the introduction of exotic species and other ship borne pollutants." As Keenan explained, "The individuals who would be impacted most from this shipping lane would also be the ones who would benefit the least from it. I would hope that a national system to permit access to the passage would also provide compensation to those impacted by it, hence my desire for the Canadian claim on it."

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